

PATENT COOPERATION TREATY

PCT/JP2003/013309

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

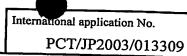
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

15 APR 2005

Applicant's or agent's file reference				
03-F-084PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416		
International application No. PCT/JP2003/013309	International filing date (day/month/year 17 October 2003 (17.10.2003	(day/month/year)		
International Patent Classification (IPC) or na C22C 38/00, 38/06, B21J 1/04	ational classification and IPC	17 October 2002 (17.10.2002)		
Applicant NATIONA	L INSTITUTE FOR MATERIA	LS SCIENCE		
This report is the international prelim Authority under Article 35 and transn	inary examination report, established by nitted to the applicant according to Artic	this International Preliminary Examining ele 36.		
2. This REPORT consists of a total of _	3 sheets, including this cov	ver sheet		
5. This report is also accompanied by Al	NNEXES, comprising:			
a. (sent to the applicant and to	o the International Bureau) a total of	sheets, as follows:		
sheets of the descrip and/or sheets contai Administrative Instr	otion, claims and/or drawings which hav ning rectifications authorized by this Au actions).	ve been amended and are the basis of this report uthority (see Rule 70.16 and Section 607 of the		
sheets which supers beyond the disclosu Supplemental Box.	ede earlier sheets, but which this Authore in the international application as file	ority considers contain an amendment that goes ed, as indicated in item 4 of Box No. I and the		
b. (sent to the International	Bureau only) a total of (indicate	type and number of electronic carrier(s))		
readable form only, as indicated Administrative Instructions)	, containing a sequence liscated in the Supplemental Box Relating	sting and/or tables related thereto, in computer g to Sequence Listing (see Section 802 of the		
4. This report contains indications relating	g to the following items:			
Box No. I Basis of the repor	rt			
Box No. II Priority				
Box No. III Non-establishmer	nt of opinion with regard to novelty, inve	ondino atau au 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Box No. IV Lack of unity of i	nvention	entive step and industrial applicability		
Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;				
Box No. VI Certain documents cited				
Box No. VII Certain defects in	the international application			
i ! =	ns on the international application			
Date of submission of the demand	Date of completion	of this report		
17 May 2004 (17.05.2004		fovember 2004 (01.11.2004)		
ame and mailing address of the IPEA/JP	Authorized officer	(01.11.2004)		
acsimile No.	Telephone No.			





1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item. This report is based on translations from the original language into the following language which is language of a translation furnished for the purpose of: International search (under Rules 12.3 and 23.1(b)) publication of the international application (under Rule 12.4) international preliminary examination (under Rules 55.2 and/or 55.3) With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not amazed to this report: The international application as originally filed/furnished the description: pages pages pages* received by this Authority on pages pages* received by this Authority on the claims: pages pages* received by this Authority on received by this Authori	With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item. This report is based on translations from the original language into the following language which is language of a translation furnished for the purpose of: international search (under Rules 12.3 and 23.1(b))	With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item. This report is based on translations from the original language into the following language which is language of translation furnished for the purpose of: International search (under Rules 12.3 and 23.1(b))	Box No. I		PCT/JP2003/013309
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

al application No. PCT/IP03/13200

Box No. V Reasoned state	ment under Article 35(2) with regard cplanations supporting such statemen	der Article 35(2) with regard to novelty, inventive step or industrial applicability;		
1. Statement	splanations supporting such statemen	t		
Novelty (N)	CI. :			
riovers (iv)	Claims	1-17	YES	
	Claims			
Inventive step (IS)	Claims		NO YES	
	Claims	1-17	NO NO	
Industrial applicability (IA)	IA) Claims	1-17	YES	
	Claims		NO	
. Citations and explanations (

Document 1: JP, 10-53813, A (O & K Co., Ltd.), February 24, 1998 (02.24.98)

Document 2: JP, 2001-234239, A (Independent Administrative Institution National Institute for Materials Science), August 28, 2001 (08.28.01)

Claims 1-17

The inventions relating to claims 1-17 do not appear to involve an inventive step based on documents 1 and 2 cited in the ISR.

Document 1 describes a bolt made of unrefined steel having a fine structure, and also describes that the structure is made fine, thereby improving strength and toughness of the steel.

Document 2 describes steel having a component composition partly identical to that of the steel described in claim 5 of the present application, and a super fine structure and Vickers hardness identical to that of the steel described in the invention of the present application.

Employing the steel described in document 2 to improve strength and toughness of the bolt described in document 1 is found to be easy for a party skilled in the art.

It is assumed that a bolt having at least the JIS strength classification of 8.8 can be obtained as a matter of course by using the steel described in document 2 having a component composition identical to that of the steel described in the invention of the present application for a bolt.

Also, the applicant asserts in the written reply that with respect to the material properties of steel, strength and ductibility oppose each other, and thus processing the steel described in document 2 with high strength as a bolt could not be easily conceived of by a party skilled in the art. However, it is a well-known technical matter that steel with a fine structure has excellent plastic processability in addition to high strength (for example, see JP, 2002-167619, A); therefore, the above argument by the applicant cannot be accepted.